

Sustainably Rehousing the Denver Museum of Nature & Science American Ethnology Collection: A White Paper

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*We aspire to curate the best understood
and most ethically held anthropology collection
in North America.*

DMNS Anthropology Aspiration Statement, 2007

In November 2007, the City and County of Denver passed a sweeping bond issue that included two sources of funding for the Museum. One bond included ca. \$19,000,000 for deferred maintenance projects in the building, portions of which date back to 1908. A second bond included \$23,000,000 toward construction of a five-story, 126,000 sq. ft. addition on the south side of the existing building (Figure 1).



Figure 1. The new addition, including 60,000 sq. ft. of collections preservation space located in two levels beneath the plaza (DMNS Neg. No. ECF 2014-5).

In addition to a new temporary exhibition gallery, a new Discovery Zone for our youngest guests, and a new school group entrance on three above-ground floors (collectively, Morgridge Family Exploration Center), the new wing includes the Avenir Collections Center, a 60,000 sq. ft., state-of-the-art collections preservation facility on two floors underground.

As we embarked on this ambitious construction project, Research and Collections Division staff committed themselves to applying, in every possible grant cycle, to all relevant federal funding programs to help equip and activate the new wing, including those offered through the National Park Service, the Institute for Museum and Library Services, the National Science Foundation, and the National Endowment for the Humanities. We are thrilled to report that we received funding from all four agencies over the last decade. Simply put, our success would not have been possible without federal support.

The Museum broke ground for the new wing on September 13, 2011. It opened to the public on Valentine's Day, 2014 and is certified LEED Platinum:

- The new wing uses 50% less energy than a standard building of its type.
- The underground location of the Avenir Collections Center is but the first layer in a complex series of passive and active environmental buffering systems designed to sustainably preserve the Museum's collections.
- The custom-designed, right-sized heating, ventilation, and air conditioning system was designed to buffer Denver's daily and seasonal temperature and humidity fluctuations, with sustainably different baseline set points in summer (72°F±3°F; 50% RH±5%) and winter (68°F ±3°F; 45% RH±5%).
- It has a ground source heat pump, solar-heated hot water, a photovoltaic array and other sustainable systems and practices.
- Energy efficient and UV-protected lighting systems are controlled by zone, by occupation sensors, and by timers to minimize their use, thus protecting collections in an energy efficient and sustainable manner
- Redundant security systems utilize concentric zones of increased security at the building, room, and cabinet level to sustainably protect the collection from theft.
- Architects and space-use consultants custom-designed compact preservation systems and cabinetry to maximize the use of space in the new facility.
- All but the very largest American Ethnology Collection (AEC) artifacts are preserved in closed, lockable cabinets as a final, sustainable buffer against threats posed by environmental fluctuations, light, theft, and catastrophic fire and water damage.

Today, the Avenir Collections Center is every bit as productive and amazing as we thought it would be. The following examples illustrate these points:

- 1) Whereas we previously had little room in which to analyze, process, or examine big collections and large objects, we now have a 1,400 sq. ft. workshop with furniture that can be moved and adjusted to suit many types of collections projects, including the massive rehousing of the American Ethnology Collection (Figure 2).



Figure 2. Anthropology staff, volunteers, and interns hard at work, including rehousing of the American Ethnology Collection, in the Anthropology workshop in the Avenir Collections Center, 2015.

- 2) Whereas the Anthropology collections were previously poorly published, we now have a collections facility that allows for in-depth study of collections and related records, activities previously limited by lack of workspace and inaccessibility of collections due to cramped and dispersed storage. We now have a suite of books, articles, book chapters, and other contributions that present the Museum's history, people, and collections to an interested public (see Bibliography). *Navajo Textiles* (Figure 3), most thoroughly highlights the Avenir Collections Center's transformative research capabilities, as we pulled hundreds of textiles that had been rehoused as a part of this project.

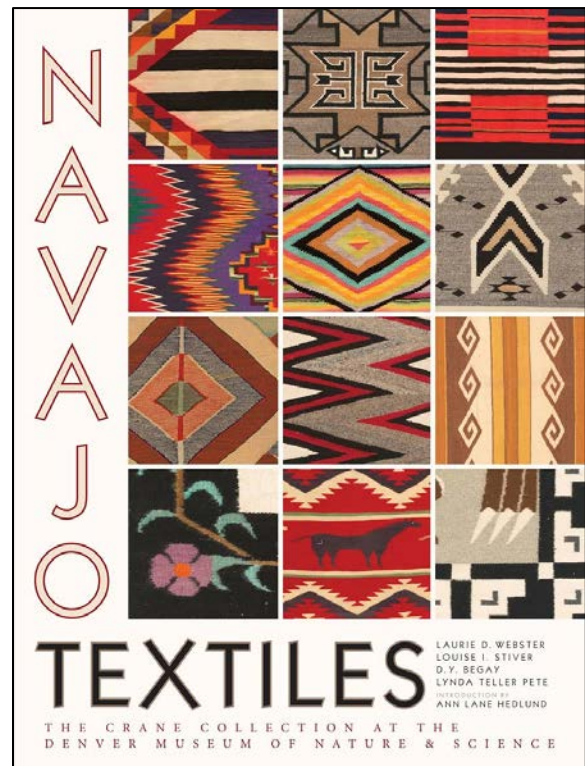


Figure 3. *Navajo Textiles: The Crane Collection at the Denver Museum of Nature & Science* (2017, the University Press of Colorado), the most recent demonstration of our systematic effort to make the American Ethnographic Collection more accessible to the public.

We are currently undertaking yet another American Ethnology Collections-based research project made possible by the Avenir Collections Center and the rehousing of this vast collection. Michael P. Jordan is leading a multi-year, culturally collaborative study of the Museum's Southern Plains beadwork collection that will result in a book manuscript being submitted to the University Press of Colorado, with whom the Museum has a co-publication agreement (Figure 4).



Figure 4. Vanessa Davis, Dr. Michael P. Jordan, and Carl Davis examining Kiowa beadwork in the anthropology workshop of the Avenir Collections Center. Jordan is leading a multi-year collaborative study of the collection that will result in a book manuscript being submitted to the University Press of Colorado. Vanessa Davis is a National Endowment for the Arts medal winner; she and Jordan state that the DMNS beadwork collection is one of the best in the country, though it remains poorly published. Together, we will change that situation.

- 3) Whereas visitation to and tours of the collections were severely limited by overcrowded collections and small spaces, the Avenir Collections Center was designed to enhance access (Figure 6). Visitation to and use of the collections has increase almost 900% in the last four years.

Simply put, the Avenir Collections Center has been transformative for the department, our collections, and the Museum.



Figure 5. Hallway and workshops in the Avenir Collections Center, designed to maximize public access. Tour groups can either 1) stay in the hallway while looking into the window-fronted workshops, 2) go into the workshops, or 3) go all the way into the collections-preservation spaces, which are accessed via the workshops.

THE 2012 NEH SUSTAINING CULTURAL HERITAGE COLLECTIONS GRANT

A 2012 grant of \$300,000 from the Sustaining Cultural Heritage Collections program at the National Endowment for the Humanities (NEH) has allowed DMNS to purchase a portion of the custom-designed museum storage equipment necessary to house the American Ethnology Collections. Specifically, NEH funds allowed us to purchase 60 of the most frequently used, standardized cabinet units used in the new facility. We also purchased four flat file systems, textile racks, art rack, and additional equipment under the grant. Tapping another \$300,000 in non-federal cost share, the Museum purchased additional Museum storage equipment, including standard cabinets, pallet rack, cantilevered shelving, and the rails and mobile carriage system that enables efficient, compact storage of Anthropology collections. The museum provided staff and volunteer time, as well as all archival supplies required for rehousing, that fell outside of the grant budget.

Since opening day, the Department of Anthropology has been working tirelessly to rehouse and install the American Ethnology Collection in the new facility (see Figure 2). During the project period, Anthropology staff and volunteers made approximately 6,575 archival storage mounts for threatened and prioritized objects from the Arctic, sub-Arctic, Northwest Coast, California, Plains, and Southwest culture areas. While that is an incredibly large number of objects rehoused, it fell short of our initial estimates for a number of reasons:

- Our initial estimates of the number of objects to be rehoused was inaccurate, as it is during the rehousing and inventory process that we catch duplicates, incorrect identification of culture or locality, etc.
- While the estimate of approximately one hour per object for rehousing is not too far off for the rehousing process, it didn't take into account all of the prep, retrieval, photography, database updates, and other steps necessary before and after the rehousing which add a significant amount of time to each object's overall process.
- Our original plan to have two or three volunteers working full time over the course of the grant period to make this project happen was unrealistic. In the end, nearly 100 very part-time

volunteers worked on this and other projects simultaneously. While we make the project as efficient as possible, the constant influx of new volunteers lengthened the time required per object.

- In hindsight, it was unrealistic to assume that all staff and volunteers would be able to work on this grant-funded project for the majority of their time, as during the move process we had numerous other projects and collections that also had to be addressed.

Overall, while we realize now that our initial goals were lofty, we see this project as being highly successful and an integral part in the overall successes of the DMNS Anthropology Department. The cabinetry and equipment installed to protect and preserve the collection is in place and we will continue over the course of the next few years to rehouse and move the remaining American Ethnology Collection into these cabinets. The Sustaining Cultural Heritage Collections grant has demonstrably improved collections stewardship of the anthropological collections at DMNS, allowing us to store a priceless collection of material culture representing ca. 420 American Indian tribes from across the Americas (Figures 6-7).



Figures 6 and 7: Museum storage equipment purchased with NEH funds and cost share, now installed in Avenir Collections Center, houses archival custom storage mounts that were created during the project period. More than 6,575 AEC objects are now preserved in this manner.

Although the NEH grant is but one brick in a cultural and scientific edifice, it is a critical component of these efforts. During the grant period, the DMNS Anthropology department successfully:

- Archival rehousing, photographed, and made accessible over 6,500 artifacts from the American Ethnology Collection, and anticipates completing the remaining 9,000 in the next three years
- Trained 96 volunteers, interns, and Teen Science Scholars to participate in the rehousing process for the American Ethnology Collection
- Hosted numerous academic and source community researchers, culminating in the publication of the *Navajo Textiles* book, with other publications forthcoming
- Created online access to collections via <http://www.dmns.org/science/integrative-collections/search-our-collections/>
- Welcomed over 10,000 members of the public—an 857% increase— into the Anthropology collections within the Avenir Collections Center to see our methods and results of the NEH funded rehousing
- Hosted over 450 collections professionals during the 2017 Society for the Preservation of Natural History Collections (SPNHC) conference, including hosting and workshop and tours highlighting our rehousing process
- Provided training or resources to 15+ collections professionals, 20+ graduate students, and ten other museums on the rehousing (Figure 9)

The dividends of all this work are paying off and will do so for generations. In the absence of NEH support, we simply would not have achieved this level of success.



Figure 9: DMNS Assistant Collections Manager Jeff Phegley (center) training University of Colorado Denver Museum Anthropology students on rehousing techniques used in this project, in the Anthropology Workshop of Avenir Collections Center.

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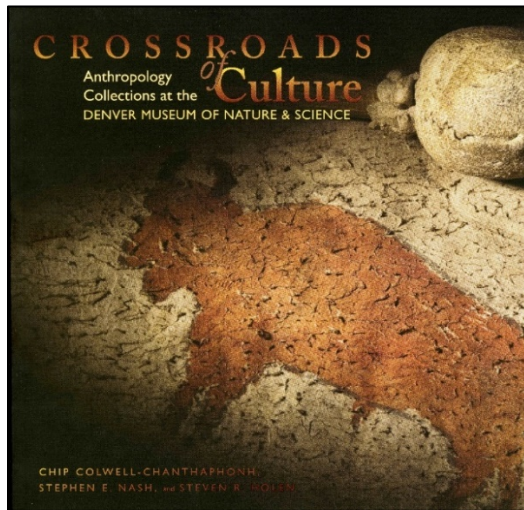


Figure 10: *Crossroads of Culture: Anthropology Collections at the Denver Museum of Nature & Science* (2010, University Press of Colorado), the opening salvo in a series of publications focusing on the Museum's anthropology collections, history, and people.

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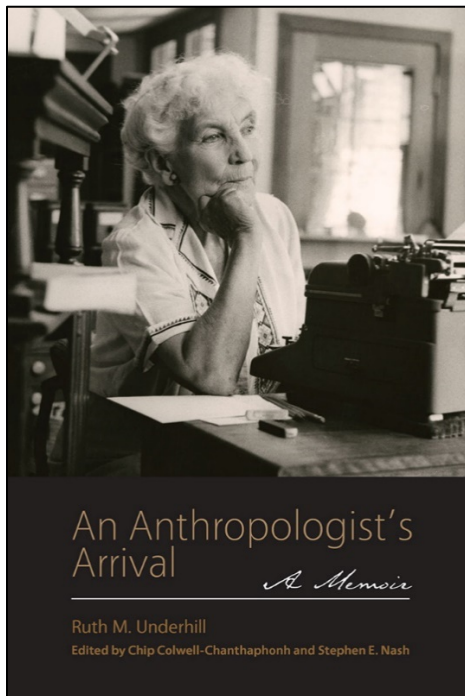


Figure 11. *An Anthropologist's Arrival: A Memoir*, by Ruth M. Underhill (2015, University of Arizona Press). One of many tangible examples of our decade-long effort to curate the best understood and most ethically held anthropology collection in North America.

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